AMENDMENTS TO THE CLAIMS   RECEIVED

Claims 1-20 (cancelled)

Claim 21 (previously presented): A method of configuring a product, the method comprising the steps of:

representing product knowledge in a hierarchical structure, wherein said representing step includes storing product category information in frames in the form of nodes of the hierarchical structure and storing product features and options in slots for respective nodes of the structure;

outputting a set of product-specific questions;

receiving individual answers to respective ones of the set of product-specific questions;

removing at least one product-specific question from the output set of product-specific questions, prior to receiving an answer to the at least one product-specific question, in response to answers received in said receiving step;

performing frame-based inferences of the product knowledge stored in the hierarchical structure based on answers received in said receiving step; and

configuring a product with features and options based on inferences made in said performing step.

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Claim 22 (previously presented): The method of configuring as recited in claim 21, wherein said representing step comprises the step of representing the hierarchical structure in the form of a tree, wherein frames of the tree maintain parent-child relationships in which a child frame inherits all of the features and options of a parent frame.

Claim 23 (previously presented): The method of configuring as recited in claim 22, wherein said configuring step further comprises the step of filtering inferences made in said performing step by executing a set of rules on the inferences made so as to produce a product configuration, wherein the product configuration is in the form of a window product.

Claim 24 (previously presented): The method of configuring as recited in claim 21, wherein said removing step comprises the step of removing a given product-specific question in response to invalidation of a slot in a frame corresponding to the given product-specific question.

Claim 25 (previously presented): A machine-readable recording medium for use in configuring a product assembly, the recording medium having stored therein a series of machine-executable program instructions executed by a machine to perform the steps of:

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requesting a product type;

prompting a set of product-specific questions selected based on product type requested;

providing answers to product-specific questions as prompted;

configuring the assembly using frame-based inferences of a product knowledge base in response to answers provided;

displaying line drawings of the assembly as configured, wherein the line drawing graphically depicts a type, size and style of the assembly as configured; and

quoting a price for the assembly as configured and displayed.

Claim 26 (previously presented): The machine-readable recording medium as recited in claim 25, wherein said displaying step further comprises the steps of:

displaying composite units of the assembly as configured; and

allowing custom configuration of the assembly as configured by allowing addition and modification of composite units to the assembly as configured.

Claim 27 (previously presented): The machine-readable recording medium as recited in claim 26, wherein the series of machine-executable program instructions further comprises the step of building a product knowledge base by storing product information related to window and door products in a hierarchical tree, wherein the

hierarchical tree is composed of frames corresponding to different products and slots within each frame corresponding to attributes of the different products.

Claim 28 (previously presented): A product configuration system for configuring products based on user interaction, the system comprising:

a user interface, wherein said user interface receives answers from the user corresponding to questions output to the user in the form of a display of graphical and textual representations;

a graphics formatting and output subsystem, wherein said graphics formatting and output subsystem performs calculations and preparations for the display of graphical and textual representations to said user interface;

a data storage subsystem, wherein said data storage subsystem is a repository of product information representing knowledge of products including type, style and size;

a configurator subsystem, wherein said configurator subsystem builds product configurations based on data from said data storage subsystem and established data relationships, wherein said configurator includes a core module for facilitating input and output data in the system, and a frame engine for computing available configuration answers for any configuration questions posed to the user at any time, wherein the frame engine is a frame-based expert system, the frame engine receiving values of answers received by said user interface and performing frame-based

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inferences of the values of answers to other questions automatically, and generating

configuration data representing configuration of a desired product based on the

inferences made; and

a data analysis subsystem, wherein said data analysis subsystem accesses

and processes data from said data storage subsystem, and wherein said data analysis

subsystem includes a pricing engine that uses the configuration data generated by the

frame engine to generate pricing for the desired product.

Claim 29 (previously presented): The product configuration system of claim

28, the system further comprising a schematic configurator that displays on said user

interface drawings representing the desired product as configured by said configurator

subsystem, and allows manipulation and graphical editing of the desired product

configuration, wherein the desired product configured is a door assembly.

Claim 30 (previously presented): The product configuration system of claim

28, the system further comprising a product code engine for both generating and

receiving as inputs codes associated with component parts included in the product

information stored in said data storage subsystem, wherein said product code engine

facilitates input to and output of the system utilizing such codes.